Instructions

- Use **black** ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- In Section A and Section B answer **all** questions.
- In Section C answer **all** of Question 3 and **one** question from **either** Question 4 or Question 5.
- Answer the questions in the spaces provided – there may be more space than you need.
- Where asked you must show all your working out with your answer clearly identified at the end of your solution.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – use this as a guide as to how much time to spend on each question.
- The marks available for spelling, punctuation, grammar and use of specialist terminology are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

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**Geography A**
**Paper 2: The Human Environment**

Tuesday 5 June 2018 – Afternoon
**Time: 1 hour 30 minutes**

You must have:
Resource Booklet (enclosed)
Ordnance Survey Map Extract (enclosed), calculator

Total Marks
SECTION A
Changing Cities

Answer ALL questions in this section.
Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☐ and then mark your new answer with a cross ☒.

1 The functions and structure of cities vary across the UK.

(a) Study the Ordnance Survey (OS) map extract.

   (i) Name the suburb of Bradford located in grid square 1736.

   ☐ A Allerton
   ☐ B Eccleshill
   ☐ C Bowling
   ☐ D Undercliffe

   (1)

   (ii) Identify the settlement pattern for the suburb of Cottingley, located in grid square 1137.

   ☐ A linear
   ☐ B dispersed
   ☐ C gridiron
   ☐ D nucleated

   (1)

   (iii) Identify the land use at grid reference 201360.

   (1)

   (iv) Identify two pieces of evidence from grid squares 1632 and 1633 to show that this area is Bradford’s Central Business District (CBD).

   (2)
(b) Recent changes in retailing have created challenges for many UK cities.

Study Figure 1a in the Resource Booklet.

(i) State two possible reasons why the Kingswood Shopping Centre was built here. (2)

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(ii) Suggest one impact of the Kingswood Shopping Centre on Hull's CBD. (2)

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(c) Identify the meaning of the term re-urbanisation. (1)

☐ A movement of people back towards a city centre to live

☐ B growth of a city into the countryside

☐ C decline and closure of industries in a city

☐ D redevelopment of brownfield sites to attract new businesses
(d) Explain **two** causes of deindustrialisation in the UK.

1...........................................................................................................................................

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(e) Rapid urbanisation has taken place in many developing and emerging countries. Study Figure 1b below.

![Bar chart showing population in selected African cities.](image)

**Figure 1b**

Past and projected populations for selected cities in Africa

(i) Plot the data for Nairobi given in the table below by completing the bar chart on Figure 1b.

<table>
<thead>
<tr>
<th>City</th>
<th>Population (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
</tr>
<tr>
<td>Nairobi</td>
<td>3.2</td>
</tr>
</tbody>
</table>
(ii) Calculate the projected increase in Kinshasa’s population between 2010 and 2025.

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(iii) State one possible reason for the trend shown on Figure 1b.

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(iv) Explain two negative impacts of rapid urbanisation on a city in a developing or emerging country.

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(f) You have studied a major city in **either** a developing or emerging country.

Evaluate the ways that the challenges of rapid urbanisation have been managed to improve the quality of life.

Named major city in a developing or emerging country

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(Total for Question 1 = 30 marks)

TOTAL FOR SECTION A = 30 MARKS

Turn over
SECTION B

Global Development

Answer ALL questions in this section.
Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☑️. If you change your mind about an answer, put a line through the box ☑️ and then mark your new answer with a cross ☑️.

2 Levels of development are different around the world due to a combination of physical and human factors.

(a) Name one indicator used in the calculation of the Human Development Index (HDI).

(1)

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(b) Study Figure 2a in the Resource Booklet.

(i) Identify one country labelled on Figure 2a with a medium HDI.

(1)

☐ A USA
☐ B India
☐ C Madagascar
☐ D Brazil

(ii) Identify the continent on Figure 2a that has the highest number of countries with a very high HDI.

(1)

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(iii) State two disadvantages of the method of presentation shown on Figure 2a.

(2)

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(c) State one physical factor that has led to variations in the level of development across the UK.

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(d) Study Figure 2b in the Resource Booklet.

(i) Identify the two countries with the highest GDP per capita.

☐ A Morocco and Kenya
☐ B France and Qatar
☐ C Qatar and Spain
☐ D Kenya and Thailand

(ii) Calculate the median GDP per capita for the countries shown on Figure 2b.

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(iii) Explain two reasons why GDP per capita is often lower in the periphery regions of a country.

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(e) Changes in population structure over the last 30 years have influenced the development of developing and emerging countries.

Study Figure 2c below.

Figure 2c

Population pyramids for Ghana, a developing country, 1986 and 2016
(i) Plot the data below to complete the 2016 population pyramid on Figure 2c.

<table>
<thead>
<tr>
<th>Age group (female)</th>
<th>Percentage (%) population</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–4</td>
<td>7.5</td>
</tr>
<tr>
<td>15-19</td>
<td>5.0</td>
</tr>
<tr>
<td>35-39</td>
<td>2.5</td>
</tr>
</tbody>
</table>

(ii) Identify the total percentage of 5-9 year olds in 1986.

- [ ] A 7.5%
- [ ] B 10%
- [ ] C 12.5%
- [ ] D 15%

(iii) State two possible reasons for the decrease in the 0–4 age group shown on Figure 2c.

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(f) Explain **two** ways geopolitical relationships have affected the development of **either** a named developing **or** emerging country.

Named developing or emerging country ..........................................................

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(g) Assess the positive and negative impacts of rapid development on either a named developing or emerging country.

Named developing or emerging country

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3 People exploit and can change environments in order to obtain natural resources.

(a) Define the term **renewable resource**.

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(b) Study Figure 3 in the Resource Booklet.

   (i) Identify the amount of forest cover in 2020 if the trend shown on Figure 3 continues.

   - A 51%
   - B 53%
   - C 55%
   - D 57%

   (1)

   (ii) Calculate the mean amount of forest cover shown on Figure 3.

   Answer to one decimal place.

   You must show your workings in the space below.

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   (2)

   (iii) Name **one** type of graph that could be used to present the data shown on Figure 3.

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   (1)
(iv) State one possible reason for the trend shown on Figure 3.

(1)

(v) Explain two ways in which the trend shown on Figure 3 could impact on the environment.

1

(4)

2

(Total for Question 3 = 10 marks)
Answer EITHER Question 4 OR Question 5

Energy Resource Management

Spelling, punctuation, grammar and use of specialist terminology will be assessed in Question 4(f).

If you answer Question 4 put a cross in the box □.

4 The increasing demand for energy is being met by different types of energy resource.

(a) Identify the meaning of the term carbon footprint.

☐ A a measure of all the different energy resources in a country
☐ B a measure of the impact of humans on the environment
☐ C a measure of the amount of energy produced and consumed
☐ D a measure of all the greenhouse gases an individual produces

(b) Natural gas is a non-renewable energy resource.

State one other non-renewable energy resource.

(c) Study Figure 4 in the Resource Booklet.

(i) Identify the increase in Africa’s percentage of natural gas production from 1970 to 2015.

☐ A 3.5%
☐ B 5.5%
☐ C 7.5%
☐ D 9.5%

(ii) Identify the region with the smallest percentage change in natural gas production between 1970 and 2015.
(iii) State **two** possible reasons for the change in the Middle East’s natural gas production shown on Figure 4.

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(d) Explain **one** disadvantage of fracking.

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(e) Explain **one** way a named developed country has attempted to manage its energy resources in a sustainable way.

Named developed country........................................................................................................

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In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(f) Assess the reasons why the UK and other countries use a mix of different energy resources.
Do not answer Question 5 if you have answered Question 4.

Water Resource Management

Spelling, punctuation, grammar and use of specialist terminology will be assessed in Question 5(f).

If you answer Question 5 put a cross in the box □.

Areas around the world have challenges in managing their water resources.

(a) Identify the meaning of the term water surplus.

- A the supply of useable water is greater than its demand
- B the amount of rainfall is lower than the amount of evaporation
- C the water quality has declined due to pollution from industry
- D the supply of useable water is lower than the demand

(1)

(b) State one reason why some areas have water supply problems.

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(1)

(c) Study Figure 5 in the Resource Booklet.

Water stress can be measured using the Water Exploitation Index (WEI).

(i) Identify the decrease in the Humber area’s WEI.

- A 2%
- B 4%
- C 6%
- D 8%

(1)

(ii) Identify the area with the smallest change in WEI between summer 2002 and summer 2012.

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(1)
(iii) State two possible reasons for the change in the North Eastern area's WEI shown on Figure 5.

1

2

(d) Explain one disadvantage of desalination.

(e) Explain one way a named developed country has attempted to manage its water resources in a sustainable way.

Named developed country
In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(f) Assess the reasons why there are differences in water consumption between a developed country and either an emerging or a developing country.
Pearson Education Ltd. gratefully acknowledges all following sources used in the preparation of this paper:

Figure 1b © UN Department of Economics and Social Affairs and Frost and Sullivan Analysis

Figure 2c http://populationpyramid.net/ghana/2016/

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Figure 1a

The Kingswood Shopping Centre located on the edge of the city of Hull
SECTION B

Very High Human Development
High Human Development
Medium Human Development
Low Human Development
No data available

Figure 2a
Human Development Index (HDI), 2015
<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per capita (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>6 361</td>
</tr>
<tr>
<td>France</td>
<td>36 248</td>
</tr>
<tr>
<td>Hungary</td>
<td>12 259</td>
</tr>
<tr>
<td>Kenya</td>
<td>1 377</td>
</tr>
<tr>
<td>Morocco</td>
<td>2 872</td>
</tr>
<tr>
<td>Qatar</td>
<td>74 667</td>
</tr>
<tr>
<td>Spain</td>
<td>25 832</td>
</tr>
<tr>
<td>Thailand</td>
<td>5 816</td>
</tr>
<tr>
<td>Uruguay</td>
<td>15 574</td>
</tr>
</tbody>
</table>

Figure 2b

Gross Domestic Product (GDP) per capita (US$) for selected countries, 2015
### SECTION C

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount of forest cover in Tanzania (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>63</td>
</tr>
<tr>
<td>1995</td>
<td>61</td>
</tr>
<tr>
<td>2000</td>
<td>59</td>
</tr>
<tr>
<td>2005</td>
<td>57</td>
</tr>
<tr>
<td>2010</td>
<td>55</td>
</tr>
<tr>
<td>2015</td>
<td>53</td>
</tr>
</tbody>
</table>

**Figure 3**

Changes in the amount of forest cover in Tanzania, 1990–2015
Figure 4

Natural gas production (billion cubic metres) in different regions of the world in 1970 and 2015
Figure 5

Water Exploitation Index (WEI) for selected areas in the UK